

ABSTRACT

A radio base station apparatus capable of improving accuracy of synchronization detection and making stable determination of reception synchronization without erroneous synchronization determination is provided.

A TFCI bit error determination section re-encodes a decoded TFCI value, and computes the difference between the re-encoded TFCI symbol and a hard-decided symbol of the received TFCI symbol. A TFCI decoding characteristic determination section computes a characteristic indicator value from a correlation result of Fast Hadamard Transform used in a soft decision TFCI decoder. An uplink radio synchronization state determination section determines state transitions of the uplink synchronization state by using synchronization state determination parameters, a reception SIR value computed by a reception SIR determination section, the number of pilot error bits computed by a pilot bit error determination section, the number of error TFCI bits computed by the TFCI bit error determination section, and the TFCI decoding characteristic indicator value computed by the TFCI decoding characteristic determination section.